

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 05086002
PUBLICATION DATE : 06-04-93

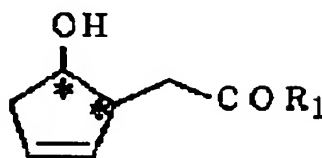
APPLICATION DATE : 13-09-91
APPLICATION NUMBER : 03234653

APPLICANT : SUMITOMO CHEM CO LTD;

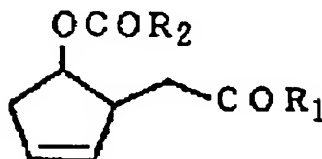
INVENTOR : UKO MASANORI;

INT.CL. : C07C235/30 C07B 57/00 C07D307/93
C12P 41/00

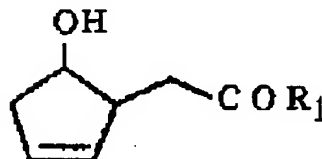
TITLE : OPTICALLY ACTIVE
CYCLOPENTENE-ALCOHOLS, THEIR
PRODUCTION AND UTILIZATION



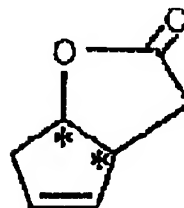
I



II



III



IV

ABSTRACT : PURPOSE: To obtain new optically active cyclopentene-alcohols useful as a medicine and an agricultural chemical, especially an intermediate for prostaglandin and readily obtain an optically active lactone by carrying out cyclizing reaction using the new compounds.

CONSTITUTION: Optically active cyclopentene-alcohols expressed by formula I (R_1 is amino which may be substituted with alkyl; the mark * indicates asymmetric carbon atom), e.g. (+)-2-(N,N-dimethylcarbamoylmethyl)-3-cyclopenten-1-ol. The compound expressed by formula I is obtained by reacting cyclopentene esters expressed by formula II (R is alkyl) with an esterase having the ability to selectively hydrolyze only one of optical isomers of the compounds. The compounds expressed by formula II are obtained by reacting cyclopentene-alcohols expressed by formula III with a carboxylic acid expressed by the formula $R_2\text{COOH}$ or its derivative in the presence of a catalyst. The compounds expressed by formula I are subjected to cyclizing reaction in the presence of a catalyst to afford an optically active lactone expressed by formula IV.

COPYRIGHT: (C)1993,JPO&Japio